

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning on page 7, line 8 with the following paragraph:

The formulations of the present invention are designed to produce a controlled increase in therapeutic plasma levels of the pharmaceutically active ingredient during the absorption phase after nasal administration. This mediated absorption of the medicament is followed by a period of controlled dissolution of the medicament to maintain therapeutic plasma levels. Without the controlled release during the absorption phase, there is a risk of too rapid absorption when applying the dosage necessary to maintain a therapeutic level of the medicament over a prolonged period. Too rapid absorption may lead to overdosage. The chitosan formulation of the present invention has demonstrated regularized and mediated absorption by ~~first zero~~ order rate kinetics during the absorption phase of the product when delivered to the nasal mucosa. For example, absorption of morphine formulated without chitosan is non-linear during the uptake phase; however, the same formulation with chitosan demonstrates linear uptake.

Please replace the paragraph beginning on page 13, line 25, with the following paragraph:

To demonstrate the tolerability and pharmacokinetic profile of a novel controlled release nasal morphine solution containing chitosan the solution was administered to healthy volunteers. The example shows "controlled" release ability of the present invention as demonstrated by regularized absorption of the product through the nasal mucosa, and the ~~first zero~~ order rate kinetics during the absorption phase of the product when delivered to the nasal mucosa.

Please replace the paragraph beginning on page 16, line 10, with the following paragraph:

Absorption of morphine formulated without chitosan was non-linear during the absorption phase, whereas ~~first-order zero-order~~ rate kinetics is represented for the formulations containing chitosan by linear curves in FIGS. 1 and 2. Linearity is apparent independent of dose of morphine (7.5, 15, 30 mg). This demonstrates controlled absorption. FIG. 3 shows the comparative plasma concentrations of morphine following nasal, oral and intravenous administration.